Predicate Decision Tree

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Predicate needs for RDF statements arise for various situations such as application development and metadata mapping for migration. Both developers and librarians might find themselves in situations that require looking for a predicate to use or deciding if a new predicate needs to be created. The purpose of this document is to help provide a review process of existing predicates and their application. This is not intended to provide specific recommendations for a given field.

1. Is the predicate for technical metadata?
   a. Basic technical properties: https://wiki.duraspace.org/display/hydra/Technical+Metadata+Application+Profile
   b. See also for additional technical properties - EBUCore
2. Is the predicate for rights metadata?
   a. http://wiki.duraspace.org/display/hydra/Rights+Metadata+Recommendation
3. Is the predicate describing structure?
   a. PCDM (https://github.com/duraspace/pcdm/wiki)
4. Is the predicate for geographic resources?
   a. Hydra Geo Interest Group
   b. General spatial characteristics of a resource - DC.spatial
   c. Latitude/Longitude - EXIF (gpsLatitude and gpsLongitude)
5. Is the predicate for preservation events or provenance?
   a. PROV-O
   b. Premis
6. Converting from MODS?
   a. https://wiki.duraspace.org/display/hydra/MODS+and+RDF+Descriptive+Metadata+Subgroup
   b. Look at DPLA Metadata Application Profile
7. None of the above? Search for Existing Predicates
   a. Prefer common ontologies:
      i. Dublin Core (DC)
      ii. SKOS
      iii. MARC Relators (Creators/Photographers/Agents/Other Publishers)
      iv. VRA
      v. Darwin Core
      vi. Schema.org
      vii. Europeana Data Model (EDM)
      viii. BIBFRAME
      ix. EBUCore
   b. RDF::Vocab - lists common OWL/RDFS vocabularies for use with RDF

  c. Search http://lov.okfn.org

  d. Review predicates minted in the Hydra community

    i. http://opaquenamespace.org

  e. Check Domain

    i. Ensure that you're not asserting incorrect assumptions about your object based on the domain of the predicate. If a predicate has a class listed for its domain, then any subject with that predicate is an instance of that class.[1]

      ● Example from EBUCore: http://www.ebu.ch/metadata/ontologies/ebucore/ebucore#height (ebucore:height under Annotation Properties)

        a. The domain of this property is a Resource class (as opposed to other classes). So only a Resource (or classes that are subclasses of Resource) would have a property of height. Other classes, such as Crew or Character, that are not a Resource or a subclass of a Resource, would not have a height.

  f. Check Ranges

    i. If the predicate's range doesn't allow literals, ensure that you won't be adding any strings as objects for statements which use it.

      ● Note: Real-world usage of predicates in Hydra applications has not always followed the range definition. This recommendation stands as it is, noting the following trade-offs:

        a. Using a value outside of the range definition for a predicate can make data unshareable (i.e., receiving a text string when expecting a Date or URI)

        b. Using a predicate that defines the meaning of the RDF statement can be preferable over providing a value that does not match the expected format or type (i.e., setting the value of dcterms:provenance to a person's name instead of providing a URI)

  g. Check Resolution

    i. Ensure the predicate itself resolves. If it does not, it may be temporarily down or have moved. Try to find a more official documentation source.

8. Still not finding what you need? Mint a new Hydra Community predicate

  a. Gather following information:

    i. Who is requesting predicate (name, institution, and email) - Email stored as Creator (dcterms:creator)

      ● e.g. jlhardes@iu.edu

    ii. Recommended URI

      ● e.g. http://purl.org/dc/terms/contributor

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[1] See https://www.w3.org/TR/rdf-schema/#ch_domain

[dcterms:contributor]
- iii. Label (rdfs:label)
  - ● e.g.   contributor
- iv. Comment (rdfs:comment) (description)
  - ● Provide succinct description to use as main property definition
- v. Usage example (skos:example)
  - ● Provide example of use of proposed term
- vi. Range (rdfs:range) (optional)
  - ● e.g.   http://purl.org/dc/terms/Agent
    [dcterms:Agent]
- vii. Domain (rdfs:domain) (optional)
  - ● e.g.   http://www.w3.org/2000/01/rdf-schema#Resource
    [rdfs:Resource]
- viii. Type (rdf:type) (optional)
  - ● If not possible, then identify some kind of domain (PCDM, GeoRSS) or other properties already in vocab manager that are similar
- ix. Super-property (rdfs:subPropertyOf) (optional)
  - ● e.g.   http://purl.org/dc/elements/1.1/contributor
    [dc:contributor]
- x. isDefinedBy (rdfs:isDefinedBy) (optional)
  - ● e.g.   http://purl.org/dc/terms/
- xi. Relationships (skos:closeMatch, skos:exactMatch, skos:broadMatch, skos:narrowMatch, skos:relatedMatch) (optional)
  - ● e.g.   skos:broadMatch http://purl.org/dc/elements/1.1/contributor
    [dc:contributor]
- xii. Additional notes (dcterms:description) (optional)
  - ● Any additional guidelines on use
- b. Use the tool to request a predicate be generated.
  - i. Who has permission to request?
  - ii. Anyone can make a request
- c. Review process?
  - i. Who reviews?
    - ● Metadata group? Sub-group?
    - ● A working group will be formed under the Hydra Metadata Interest Group and a review process will be defined and refined within that group
  - ii. Reviewing Criteria?

For questions or comments or feedback, please contact the Hydra Metadata Interest Group.